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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 09/486,723 | 05/18/2000 | MICHAEL LAMLA | JEK/LAMLA | 2431 |
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| 04/22/2009 | | | | |
| EXAMINER | | | | |
| PICH, PONNOREAY | | | | |
| ART UNIT | | PAPER NUMBER | | |
| 2435 | | | | |
| MAIL DATE | | DELIVERY MODE | | |
| 04/22/2009 | | PAPER | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/486,723

Applicant(s)

LAMLA ET AL.

Examiner

PONNOREAY PICH

Art Unit

2435

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 April 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- 7) ☐ Paper No(s)/Mail Date: _____

DETAILED ACTION

A request for continued examination under 37 CFR 1.114 was filed in this application after a decision by the Board of Patent Appeals and Interferences, but before the filing of a Notice of Appeal to the Court of Appeals for the Federal Circuit or the commencement of a civil action. Since this application is eligible for continued examination under 37 CFR 1.114 and the fee set forth in 37 CFR 1.17(e) has been timely paid, the appeal has been withdrawn pursuant to 37 CFR 1.114 and prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on 4/20/09 has been entered.

Claims 1-14 are pending.

Response to Amendment and Arguments

Applicant's amendments and arguments directed at the amended claims were fully considered, but are moot in view of new rejections made below in response to the amendments.

Note that while the examiner did rely on the teachings of a secondary reference to meet the new limitations as currently amended in the independent claims, the examiner believes that the claims as amended would also have been obvious over the teachings of Saliba (US 5,894,425) alone, especially in light of *KSR v. Teleflex*. As pointed out by applicant in the remarks filed, the changes removes language from the claim indicating intended use of the two channels so that the claim now more clearly requires that each channel have certain properties. Based on Saliba's teachings alone, it would have been obvious to have two bidirectional IR channels between PDA 50 and

computer 12 as seen in Figure 1, each of the IR channels being the claimed first and second bidirectional communication channels respectively. This can be done by modifying PDA 50 to have two logically and physically separate IR ports like in computer 12, which as per *KSR v. Teleflex* is nothing more than applying a known technique (of having multiple IR ports in one device) to a known device ready for improvement to yield predictable results (of having two IR communication channels between the PDA 50 and computer 12). Since both PDA 50 and computer 12 would have at least two IR ports, there would then be two bidirectional communication channels that are physically and logically separated and having the properties as claimed in the independent claims pending.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 8-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

1. Claim 8 recites on line 13 "the ISO standard", which lacks antecedent basis.

There are many ISO standards in existence, thus it is unclear to which ISO standard is being referred to in line 13.

2. Claims not specifically addressed are rejected due to dependency.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saliba (US 5,894,425) in view of Bradley et al (US 5,309,564).

Claim 1:

Saliba discloses:

1. Establishing a first bidirectional channel between the data carrier and the external device, the first bidirectional transmission channel being configured to exchange signals having patterns between the data carrier and the external device (Fig 1; col 5, lines 56-65; and col 6, lines 17-64). *Note that computer 12 has many storage devices that each has their own IR unit 24. The PDA 50 is able to form a separate communication channel with any IR unit 24 for exchanging various types of data. As such, there are multiple IR channels that can be established between PDA 50 and computer 12 seen in Figure 1. If one were to view the PDA 50 as the data carrier, then the computer 12 is considered the external device. If instead PDA 50 is viewed as the external device, then computer 12 is viewed as the data carrier.*
2. Establishing a second bidirectional transmission channel between the data carrier and the external device, the second bidirectional channel being configured

to exchange signals having signal patterns between the data carrier and the external device, wherein the second bidirectional transmission channel is activable during the total time period between activation and deactivation of the data carrier (Fig 1; col 4, line 49-col 5, line 35; col 5, lines 56-65; and col 6, lines 17-64).

3. Having the data carrier generate a signal required for authenticity testing (col 5, lines 17-64).
4. Transmitting the signal for authenticity testing from the data carrier to the external device or a signal required for generating the signal for authenticity testing from the external device to the data carrier at least partly via the second bidirectional transmission channel (col 6, lines 17-64).
5. Having the external device receive the signal for authenticity testing, and deciding on the basis of the received signal whether the data carrier is authentic (col 6, lines 17-64).

Saliba does not explicitly disclose the second bidirectional transmission channel is logically separate from the first bidirectional transmission channel, the separation of the first and second bidirectional transmission channel being such that data transmission via one bidirectional transmission channel does not interfere with data transmission via the other bidirectional transmission channel. However, Bradley discloses logical separation of bidirectional transmission channels was well known in the art at the time applicant's invention was made (col 7, lines 56-65 and col 8, lines 13-

23). Note that in the cited sections logical separation is achieved either via physical separation of the channel or by via modulation of a single physical into two separate channels. No matter the type of channel separation used, the separation of the first and second bidirectional transmission channels is such that data transmission via one bidirectional channel does not interfere with data transmission via the other bidirectional transmission channel. Note also that in Figure 1 of Saliba, not only does computer 12 have multiple IR ports, PDA 50 is also shown in the Figure as having two IR ports 52, one that is built into the PDA and the other provided via a PC card 53. In light of these teachings, it would have been obvious to one of ordinary skill in the art to modify Saliba's invention so that the second bidirectional transmission channel is logically separate from the first bidirectional transmission channel, the separation of the first and second bidirectional transmission channel being such that data transmission via one bidirectional transmission channel does not interfere with data transmission via the other bidirectional transmission channel. One would have done this by either having two separate IR ports in PDA 50 where each IR port in the PDA communicated with a different IR port in computer 12 or by modulating the IR signals sent between PDA 50 and computer 12 into two separate channels. One skilled would have been motivated to do so because it would increase the throughput of data transmitted between PDA 50 and computer 12. Another rationale for why it would have been obvious to modify Saliba's invention in the manner discussed is that doing so is nothing more than applying a known technique to a known device, ready for improvement to achieve the

predictable result of having two logically and/or physically separate bidirectional communication channels.

Claim 2:

Saliba and Bradley disclose all the limitations of claim 1. Bradley further discloses the second bidirectional transmission channel is provided by modulating the signal of the first bidirectional transmission channel (col 8, lines 13-23).

Multiple logical channels are achieved either by phase shift or frequency shift keying modulation methods on a single physical channel.

Claim 3:

Saliba and Bradley disclose all the limitations of claim 2. Bradley further discloses that modulation does not impair an ISO compatibility of data exchange between the data carrier and the external device existing for the first bidirectional transmission channel (col 4, lines 41-46).

The EIA typically tries to comply with ISO standards, thus the modulation done by Bradley would not impair any ISO compatibility of data exchange between endpoints on either channels achieved via modulation. At the very least, Bradley's teachings would have made it obvious to one of ordinary skill in the art to not have the modulation impair any ISO compatibility of data exchange between the data carrier and the external device existing for the first bidirectional transmission channel because keeping a system functioning as close as possible according to ISO standards allows for easier and cheaper maintenance of electronic systems.

Claim 4:

Saliba and Bradley implicitly disclose modulation is performed in areas of the signal pattern which are not evaluated according to ISO 7816 (Saliba: col6, lines 47-64 and Bradley: Fig 2B). ISO 7816 is an international standard related to electronic identification cards, especially smart cards. Since neither Saliba nor Bradley have to use electronic identification cards, the modulation done in Saliba and Bradley's combination invention is performed in areas not evaluated according to ISO 7816.

Claim 5:

As per the limitation that changes caused by modulation in the signal of the first bidirectional transmission channel are within range of variation of signal level permitted by ISO 7816, it is obvious over Saliba's teachings (col 5, lines 26-43). Note that in Saliba's invention, the IR port of the PDA could be achieved via use of a PC card 53. PC card 53 could be considered a smart card since it is portable card with embedded circuits that processes data. One skilled should further appreciate that ISO 7816 relates to smart cards, thus any PC card used to provide an IR port to PDA 50 in Saliba's invention would have to be within the range of variation of signal level permitted by ISO 7816. Even if the card's signal was modulated to provide bidirectional transmission channels, the changes caused by the modulation in the signal of the first transmission channel would still have to be within range of variations of signal level permitted by ISO 7816 to ensure the card works properly.

Claim 6:

Saliba and Bradley disclose all the limitations of claim 2. Bradley further discloses that modulation and demodulation of the signal are performed in the data

carrier and in the external device with the aid of a mixing/demixing device in each case (Fig 3A and 3B and col 10, line 55-col 11, line 10).

Claim 7:

Saliba further discloses the first bidirectional transmission channel is a line for transmitting standard data or a line for transmitting a clock signal or a line for supply voltage (col 5, lines 56-65).

Claim 11:

As per claim 11, the limitation is obvious to the combination invention of Saliba and Bradley. One skilled should appreciate that if the data carrier and the external device cannot exchange data, then the external device cannot receive the authentication data to verify the data carrier is authentic, thus the decision on authenticity of the data carrier is contingent on whether data exchange is possible between the devices to which the first and second bidirectional channels are coupled in the data carrier.

Claim 8:

Saliba discloses:

1. Establishing a first bidirectional channel between the data carrier and the external device, the first bidirectional transmission channel being configured to exchange signals having patterns between the data carrier and the external device (Fig 1; col 5, lines 56-65; and col 6, lines 17-64). *Note that computer 12 has many storage devices that each has their own IR unit 24. The PDA 50 is able to form a separate communication channel with any IR unit 24 for*

exchanging various types of data. As such, there are multiple IR channels that can be established between PDA 50 and computer 12 seen in Figure 1. If one were to view the PDA 50 as the data carrier, then the computer 12 is considered the external device. If instead PDA 50 is viewed as the external device, then computer 12 is viewed as the data carrier.

2. Establishing a second bidirectional transmission channel between the data carrier and the external device, the second bidirectional channel being configured to exchange signals having signal patterns between the data carrier and the external device, wherein the second bidirectional transmission channel is activable during the total time period between activation and deactivation of the data carrier (Fig 1; col 4, line 49-col 5, line 35; col 5, lines 56-65; and col 6, lines 17-64).
3. Having the data carrier generate a signal required for authenticity testing (col 5, lines 17-64).
4. Transmitting the signal for authenticity testing from the data carrier to the external device or a signal required for generating the signal for authenticity testing from the external device to the data carrier at least partly via the second bidirectional transmission channel (col 6, lines 17-64).
5. Having the external device receive the signal for authenticity testing, and deciding on the basis of the received signal whether the data carrier is authentic (col 6, lines 17-64).

Saliba does not explicitly disclose the second bidirectional transmission channel is physically separated from the first bidirectional transmission channel and comprising at least one line or contactless transmission path not provided according to the ISO standard. However, Bradley discloses a second channel being achieved by a physically separate channel separate from the first channel was well known in the art (col 7, lines 56-58). Note also that in Figure 1 of Saliba, not only does computer 12 have multiple IR ports, PDA 50 is also shown in the Figure as having two IR ports 52, one that is built into the PDA and the other provided via a PC card 53. In light of these teachings, it would have been obvious to one of ordinary skill in the art to modify Saliba's invention so that the second bidirectional transmission channel is physically separated from the first bidirectional transmission channel. One skilled would have done this by having two IR channels on the PDA, one built into the PDA and the other provided via a PC card. In doing this, note that the channel provided by the IR port built into the PDA is at least one line or contactless transmission path not provided according to the ISO (7816) standard. The rationale for why it would have been obvious to modify Saliba's invention in the manner discussed is that doing so is nothing more than applying a known technique to a known device, ready for improvement to achieve the predictable result of having two physically separate bidirectional communication channels.

Claim 9:

Saliba further discloses that the contactless transmission path is realized by transmitting the data as electromagnetic, electrostatic, magnetic, acoustic or optical signals (Fig 1 and col 5, lines 37-35). IR is a type of optical signal.

Claim 10:

Saliba further discloses that a mixture of wavelengths is used for transmission via the contactless transmission path (col 6, lines 20-21). Use of synch patterns implies a mixture of wavelength used in transmission.

Claim 12:

Saliba discloses:

1. The data carrier has a first device configured to generate signals for data exchange between the data carrier and the external device via a first bidirectional transmission channel (Fig 1; col 5, lines 56-65; and col 6, lines 17-64).
2. The data carrier has a second device configured to generate signals required for authenticity testing of the data carrier, the second device being configured to exchange data between the data carrier and the external device via a second bidirectional transmission channel, the second device being connect with the first device (Fig 1 and col 6, lines 16-64).
3. The second device is ready for generating signals for authenticity testing of the data carrier during the total time period between activation and deactivation of the data carrier (col 4, line 49-col 5, line 35).

Saliba does not explicitly disclose the first and second bidirectional transmission channels are separated logically or physically, and data exchange with the second device does not interfere with data exchange with the first device, and the second device is read. However, Bradley discloses logical and physical separation of

bidirectional transmission channels was well known in the art at the time applicant's invention was made (col 7, lines 56-65 and col 8, lines 13-23). No matter the type of channel separation used, the separation of the first and second bidirectional transmission channels is such that data transmission via one bidirectional channel does not interfere with data transmission via the other bidirectional transmission channel. Note also that in Figure 1 of Saliba, not only does computer 12 have multiple IR ports, PDA 50 is also shown in the Figure as having two IR ports 52, one that is built into the PDA and the other provided via a PC card 53. In light of these teachings, it would have been obvious to one of ordinary skill in the art to modify Saliba's invention so that the second bidirectional transmission channel is logically or physically separate from the first bidirectional transmission channel, the separation of the first and second bidirectional transmission channel being such that data transmission via one bidirectional transmission channel does not interfere with data transmission via the other bidirectional transmission channel. One would have done this by either having two separate IR ports in PDA 50 where each IR port in the PDA communicated with a different IR port in computer 12 or by modulating the IR signals sent between PDA 50 and computer 12 into two separate channels. One skilled would have been motivated to do so because it would increase the throughput of data transmitted between PDA 50 and computer 12. Another rationale for why it would have been obvious to modify Saliba's invention in the manner discussed is that doing so is nothing more than applying a known technique to a known device, ready for improvement to achieve the

predictable result of having two logically and/or physically bidirectional transmission channels.

Claim 13:

The limitation further recited in claim 13 is similar to what is further recited in claim 6. Claim 13 is rejected for substantially similar reasons as what was discussed in claim 6's rejection.

Claim 14:

Claim 14 is directed towards a system which implements the method of claims 1 or 8 and is rejected for substantially similar reasons discussed in claims 1 and 8.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PONNOREAY PICH whose telephone number is (571)272-7962. The examiner can normally be reached on 9:00am-4:30pm Mon-Thurs.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Vu can be reached on 571-272-3859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ponnoreay Pich/
Examiner, Art Unit 2435